

### ABSTRACT OF THE DISCLOSURE

The invention includes a method and apparatus for planning a mission profile in real time on board a platform or a vehicle dispensed from a platform. In general, the mission planning technique includes ascertaining a plurality of target information, including a target location, a target velocity, and a target location error. This is followed by an autonomous determination of a pattern from the ascertained target information. In one particular implementation, the autonomous determination includes projecting along a target axis a direction opposite a target heading defined by the target velocity a distance of at least twice the target location error to establish an intersection of the target axis with the target location error; projecting left and right relative to the target axis from the intersection a distance at least as great as one-half the target location error to determine a pair of possible start points; selecting the possible start point closest to the platform; determining a dispense point; laying out a trace from the selected start point; and translating the trace along a heading defined by the target velocity a distance determined by the elapsed time of travel for the platform to the dispense point and for a vehicle from the dispense point to the start point. In other aspects, the invention includes a computing device programmed to perform this autonomous determination or a program storage device encoded with instructions for performing such a determination.

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